

quantitatively determine the cause of the cross-eyed or wall-eyed condition, and can initiate the the applicable surgical procedure to correct the deficiency. Typical force-displacement data are plotted in the graph depicted in FIG. 5. There, muscle tension in grams for each eye is plotted versus its position, where the eye position is denoted in degrees in the temporal or nasal direction, as denoted. Here, for illustrative purposes, the difference in measurements between the two eyes is depicted by two curves, 62 and 64. The surgeon can then determine the amount and location of the muscle of the eye which must be shortened or lengthened to correct the strabismus.

Use of the combined clip and dynamometer gage also provides information as to possible other ophthalmic abnormalities. For example, a severe nonlinearity in the force-displacement curve, as shown by the torque readings on the dynamometer gage, may indicate the possible existence of a tumor, which obstructs free movement of the eyeball and presents an impediment or hump which temporarily impedes the motion of the eye as it is pulled by the combined dynamometer gage and clip.

Although the invention has been described with reference to a particular embodiment thereof, it should be realized that various changes and modifications may be made therein without departing from the spirit and scope of the invention.

What is claimed is:

1. Apparatus useful in the correction of strabismus comprising a clip including means attachable to the sclera of an eye without damage thereto for movement of the eye in a desired direction, a force measuring device, and means coupling said device to said clip for enabling said clip to move the eye in only the desired direction and for enabling said device to measure accurately any resistance exerted by anything associated with the eye against the movement.
2. Apparatus according to claim 1 in which said clip comprises a pair of spring-loaded levers pivoted about a fulcrum, and including jaws attachable to the sclera.
3. Apparatus according to claim 2 in which said levers further include extensions respectively secured to each of said jaws at said fulcrum and normally angled away from each other under spring-loading.
4. Apparatus according to claim 3 further including apertures extending respectively through said extensions and a spring ring passing through the apertures and against said jaws for exerting a closing force on said jaws.
5. Apparatus according to claim 4 in which said spring ring is split to define a pair of ends, and further comprising recesses respectively placed in said jaws for receipt of and for relatively immobilizing said split spring ring ends to avoid spontaneous disassembly of the clip during use.
6. Apparatus useful in the correction of strabismus comprising a clip including a pair of spring-loaded levers pivoted about a fulcrum, and jaws having a Pierse-

type forceps profile attachable to the sclera of an eye without damage thereto, a force measuring device, and means coupling said clip and said device to enable linear movement of the eye and to isolate movements other than the linear movement from any change therein whereby, when the eye and its muscle are adapted to be moved, said device will accurately measure any resistance exerted by the muscle or other impediment against the linear movement.

7. Apparatus according to claim 6 further including an elongated relief positioned between said Pierse-type forceps shaped jaws and said fulcrum.

8. Apparatus useful in the correction of strabismus comprising a clip including a pair of spring-loaded levers pivoted about a fulcrum and jaws attachable to the sclera of an eye without damage thereto for movement of the eye in a desired direction, a dynamometer having an arm moveable in a single plane, and means coupling said dynamometer to said clip for enabling said clip to move the eye in only the desired direction and for enabling said dynamometer to measure any resistance exerted by anything associated with the eye against the movement, said fulcrum and said jaw being attachable to the sclera and cooperatively comprising a shaft pivotally connecting said clip to said arm to isolate any motions exerted on said dynamometer which would detract from the desired motion.

9. Apparatus according to claim 8 wherein said pivotally connecting shaft permits movement of said clip in a single plane which is orthogonal to the plane in which said arm moves.

10. A force-measuring instrument comprising a clip terminating in attachment jaws for gripping a specimen, a device for measuring movement of the specimen in a desired direction, and means coupling said clip to said device for isolating any motions imparted on the specimen which would detract from measurements of the movement in the desired direction.

11. An instrument according to claim 10 in which said clip includes a pair of spring-loaded levers pivoted about a fulcrum, and further including an elongated relief positioned between said jaws and said fulcrum.

12. An instrument according to claim 10 in which said clip includes a pair of spring-loaded levers pivoted about a fulcrum and respectively secured to each of said jaws at said fulcrum and normally angled away from each other under spring-loading.

13. An instrument according to claim 12 further including apertures extending respectively through said levers and a spring ring passing through the apertures and against said jaws for exerting a closing force on said jaws and for securely retaining said spring ring against inadvertent disassembly of said clip during use.

14. An instrument according to claim 13 in which said spring ring is split to define a pair of ends, and further comprising recesses respectively placed in said jaws for receipt of said split spring ring ends.

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